AMENDMENTS TO THE SPECIFICATION

Please amend page 16, beginning at line 6, as follows:

As the metal to be used in the supporting part, it is preferable to have a material having as the main components Fe, Ni, and Co, which are close in thermal expansion coefficient to the ceramic of the lens body, are relatively inexpensive, and are also excellent in environmental resistance. Examples include iron (Fe), 54% Fe - 29% Ni - 17% Co alloy (trade name: ~~cobar~~ KOVAR®), 42 alloy, 46 alloy, and 426 alloy.

Please amend page 17, beginning at line 7, as follows:

In forming such an interposed layer, comprised of metal, directly on the ceramic, a small amount of an active metal or a below-mentioned low-melting-point glass may be added to increase the strength of bonding with the ceramic, or the surface roughness of the connected surface of the ceramic may be controlled to heighten the anchor effect on the connected surface. Examples of an active metal that is added in this case include group IVa metals (Ti, Zr, and Hf) and group Va metals (V, Nb, and Ta). The surface roughness of the ceramic is preferably controlled to be in the range of approximately 0.1 to 1 μ m as Ra as defined in JIS B 0601. This is because below the lower limit, the level of bonding strength tends to be scattered while when the upper limit is exceeded, the thickness of the metal layer tends to be non-uniform. In place of a layer comprised of an abovementioned metal, a layer of a glass (the abovementioned low-melting-point glass), which is lower in melting point than the ceramic of the lens body and the metal material that comprises the supporting part, may be formed as the interposed layer. As the low-melting-point glass to be used, an appropriate glass is selected in accordance with the combination of the materials of the lens and the supporting part. That is, it is preferable to select a glass material with a melting temperature at which these parts will not be degraded and with a thermal expansion coefficient that is close to that of the ceramic used. For example, if ZnS or spinel ($MgAl_2O_4$) is used in the ceramic and ~~cobal (trade name)~~ a 54% Fe - 29% Ni - 17% Co alloy (KOVAR®) is used in the supporting part, a glass in selected with which the working temperature is approximately 300 to 500 ° C and the thermal expansion coefficient is approximately 4 to 10 x 10^{-6}/° C and thus is close to that of the ceramic. Borate glass can be given as an example of a preferable glass. This layer of low-melting-point glass is normally disposed between the interposed layer on the supporting part and the ceramic.

Please amend page 43, beginning at line 9, as follows:

The same high density polyethylene resin as that of the resin layer coated on the ceramic light receiving part, ~~cobal (trade name)~~ 54% Fe - 29% Ni - 17% Co alloy (KOVAR®), SUS 304 stainless steel, and S45C steel, were prepared as raw materials for the supporting part. In the case of a resin supporting part, the supporting part was made to have the shape shown in (5) of FIG. 3 in which the resin layer coated on the lens and the supporting part of the same material are made integral. In this case, a mold such as that shown in FIG. 6 was used to directly connect the lens body and the supporting part by injection molding. With some of such samples, a cylindrical part, which was formed to be integral to the supporting part, was provided on the inner side of the supporting part at the same time the supporting part was formed, and a detection part was fixed to the bottom of the cylindrical part as shown in (1) of FIG. 7. In cases where the supporting part was made of metal, the supporting part was made to have one of the shapes shown in (1) to (4) of FIGS. 3 and 4 and the lens body was connected to the supporting part via the layer indicated in the "Arrangement of the connecting layer" column of Table 6. The order of disposition of the respective layers of the connecting layer in this column is indicated in a manner such that the leftmost side is the lens side and the rightmost side is the supporting part side. The thermal expansion coefficient of the ceramic lens at room temperature is approximately $6.9 \times 10^{-6}/^{\circ}C$ in the case of a lens having zinc sulfide (ZnS) as the main component and approximately $6.7 \times 10^{-6}/^{\circ}C$ in the case of a lens having spinel as the main component. The thermal expansion coefficients of ~~cobal~~ 54% Fe - 29% Ni - 17% Co alloy (KOVAR®), SUS304, and S45C steel are approximately 5.4, 9.9, and 14, respectively, in units of [$\times 10^{-6}/^{\circ}C$]. The thermal expansion coefficient of high density polyethylene is approximately $80 \times 10^{-6}/^{\circ}C$.

Please amend page 44, beginning at line 11, as follows:

With all samples, the supporting part was formed to have external dimensions of approximately 24 mm in outer diameter and 7.65 mm in height. With items classified under "Integral" in the "Connection type" column of Table 6, the supporting part was formed integrally using the same resin as the coating layer of the lens, with items under "With cylindrical part", the cylindrical part was also formed integrally using the same resin, and with items under "Glass connection", the lens and the supporting part were connected in the following manner. That is, a

nickel plating layer of 3 μm thickness was formed on the entire surface of the ~~cobal~~ 54% Fe - 29% Ni - 17% Co alloy (KOVAR®) supporting part in advance. Thereafter an aqueous paste of a boron oxide--lead oxide type oxide glass was applied between the already plated layer and the lens, and the lens was placed on a predetermined position of the supporting part and connected and fixed by heating to 500 ° C. in air. With items classified under "Soldered", a nickel plating layer of 3 μm thickness was formed on the entire surface of the supporting part and the part of the lens to be connected with the supporting part. Thereafter, an Sn--Pb type solder foil was sandwiched between the supporting part and the lens and these parts were connected by heating to 200 ° C. With items classified under "Adhered", the two parts were connected directly using a two-liquid type epoxy adhesive agent (trade name: AF-163-2K, made by Sumitomo 3M Inc.). With samples 4 and 5 under "Silver brazing", the connection was made by sandwiching a silver brazing foil of the BAG1 type as defined by JIS between the nickel plated surfaces of the lens and the supporting part and heating to 800 ° C. With sample 6, the two parts were connected directly using the same silver brazing material and without forming plated layers. The thermal expansion coefficients of the glass, epoxy adhesive agent, solder, and silver brazing material at room temperature are approximately 6.5, 100, 24.7, and 19.6 in units of [x $10^{-6/°}$ C]. 50 each of the respective assemblies were thus prepared.

Please amend page 47, Table 6, beginning at line 1, as follows:

Table 6

No	Combination of lens raw material	Raw material of supporting part	Connection type	Arrangement of connecting layer	Reliability of connection	
					Degree of sealing P	Thermal cycle
1	Sample 2 of Example 1	HPE	Integral	No connecting layer	2	O
2	Same as above	Same as above	Integral With cylindrical part	No connecting layer	2	O
3	Same as above	~~Cobal~~ 54% Fe - 29% Ni - 17% Co alloy (KOVAR®)	Glass connection	Plating / glass / plating	<1	O

4	Same as above	Same as above	Silver brazing connection	Plating / silver brazing / plating	<1	Δ
*5	Same as above	SUS304	Same as above	Same as above	<1	X
*6	Same as above	S45C	Same as above	Silver brazing	<1	X
7	Same as above	Same as above	Adhered	Epoxy adhesive agent	2	O
8	Same as above	Same as above	Soldered	Plating / soldered / plating	<1	O
9	Sample 8 of Example 3	HPE	Integral	Without interposed layer	2	O
10	Same as above	Same as above	Integral With cylindrical part	No connecting layer	2	O
11	Same as above	~~Cobal~~ 54% Fe - 29% Ni - 17% Co alloy (KOVAR®)	Glass connection	Plating / glass / plating	<1	O
12	Same as above	Same as above	Adhered	Epoxy adhesive agent	2	O
13	Same as above	Same as above	Soldered	Plating / soldered / plating	<1	O
14	Sample 10 of Example 3	HPE	Integral With cylindrical part	No connecting layer	2	O
15	Same as above	Same as above	Soldered	Plating / soldered / plating	<1	O
16	Sample 17 of Example 3	HPE	Integral	No connecting layer	2	O
17	Same as above	Same as above	Integral With cylindrical part	No connecting layer	2	O

18	Same as above	~~Cobal~~ 54% Fe - 29% Ni - 17% Co alloy (KOVAR®)	Glass connection	Plating / glass / plating	<1	O
19	Same as above	Same as above	Adhered	Epoxy adhesive agent	2	O
20	Same as above	Same as above	Soldered	Plating / soldered / plating	<1	O
21	Sample 19 of Example 3	HPE	Integral With cylindrical part	No connecting layer	2	O
22	Same as above	Same as above	Soldered	Plating / soldered / plating	<1	O

Examples marked with * are comparative examples. The unit for the degree of sealing is [H 10^{-4}Pa$\times$cm^3/sec]